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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/025,492	12/26/2001	Hiroyuki Hattori	02860.0700	7896

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EXAMINER

LAVARIAS, ARNEL C

ART UNIT PAPER NUMBER

2872

DATE MAILED: 08/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Appli ation No.

10/025,492

Applicant(s)

HATTORI ET AL.

Examiner

Arnel C. Lavarias

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, Claims 1-5, in Paper No. 5, dated 6/24/03, is acknowledged.

Drawings

2. The corrected or substitute drawings were received on 6/24/03 in Paper No. 4. These drawings are acceptable.

Response to Amendment

3. The amendments to specification of the disclosure in Paper No. 5, dated 6/24/03, are acknowledged and accepted. In view of these amendments, the objections to the specification in Section 9 of Paper No. 3, dated 3/26/03, are respectfully withdrawn.
4. The addition of Claim 9 in Paper No. 5, dated 6/24/03, is acknowledged and accepted.

Response to Arguments

5. The Applicants argue that, with respect to Claim 1, Meyers fails to teach or reasonably suggest an optical element molded between a first die and a second die which are jointed along a partition line, including in particular a second optical surface being a refractive surface opposite to the first optical surface, and the second edge portion being positioned at the partition line between the first die and the second die. The Examiner respectfully

disagrees. The Examiner points out that the first optical surface, with adjoining first edge portion, on which a diffractive structure is provided has been defined be 3 of Figure 2 and S2 of Figure 24 of Meyers. Additionally, the second optical surface, with adjoining second edge portion, being a refractive surface opposite to the first optical surface has been defined as 1 of Figure 2 and S1 of Figure 24 of Meyers. Furthermore, Figure 24 of Meyer discloses that the first edge portion and the second edge portion of the flange, i.e. the upper and lower joined edges of S1 and S2, are both positioned at the partition line between the first and second die. The Applicants argue that the mold with the diffractive surface relief pattern is fixed and does not move during processing. Meyer fails to mention this, and such a limitation is not recited in the claims.

6. The Applicants argue that Nisper et al. in view of Ueda et al. fails to teach or reasonably suggest a second optical surface, with adjoining second edge portion, being a refractive surface opposite to the first optical surface and wherein the second edge portion is positioned at the partition line between the first and second die. The Examiner respectfully disagrees. Both Nisper et al. discloses an optical element having a first optical surface on which a diffractive structure is provided (See upper surface of Figure 6 in Nisper et al.; see 21 in Figure 6E of Ueda et al.) and a second optical surface being a refractive surface opposite to the first optical surface (See lower surface of Figure 6 in Nisper et al.; see upper surface indicated by 14 in Figure 6E of Ueda et al.). Nisper additionally discloses a partition line between the first and second die, wherein incidentally, both the upper and lower surfaces are positioned at this partition line. Both Nisper et al. and Ueda et al. disclose molding techniques for manufacturing the optical

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elements. Ueda et al. is being relied upon, as stated in Paper No. 3, dated 3/26/03, to teach the use of a flange on the periphery of an optical element, the flange having a first and second edge portion (See Figures 4-6). Furthermore, Ueda et al. teaches *two* partition lines, one adjoining the first edge portion and another adjoining the second edge portion (See in particular Figure 5B). Finally, it is extremely well known in the art, even if not gleaned from only Nisper et al. and Ueda et al., to provide such flange structure on optical elements, since such structures are routinely used as mounting surfaces on mounting structures, and also as handling surfaces such that one may hold/handle the optical element without touching/spoiling the main surface of the optical element.

7. Claims 1-5, and 9 are rejected as follows.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Meyers (U.S. Patent No. 5543966).

See Section 11 in Paper No. 3, dated 3/26/03.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers in view of Maruyama (U.S. Patent No. 5978140).

See Section 13 in Paper No. 3, dated 3/26/03.

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meyers.

Meyers discloses the invention as set forth above in Claim 1, except for the first surface being a convex surface. It is very well known in the art of optics to provide diffractive structure on convex, concave, as well as planar surfaces. One skilled in the art would do this for the purpose of providing additional refractive (i.e. focusing or defocusing) power to the diffractive structure, based on the intended application of the optical element.

13. Claims 1, 3-5, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nisper et al. (U.S. Patent No. 5538674) in view of Ueda et al. (U.S. Patent No. 6215591).

See Section 14 in Paper No. 3, dated 3/26/03.

The Examiner notes that, with respect to newly added Claim 9, Nisper et al. discloses the invention as set forth above in Claim 1, except for the first surface being a convex surface. It is very well known in the art of optics to provide diffractive structure on

convex, concave, as well as planar surfaces. Furthermore, Ueda et al. teaches an optical element molded between a first and a second die (See Figures 4-6) wherein the diffractive structure is provided on a convex optical surface (See specifically 21a in Figure 4 and 21 in Figure 6E). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first surface of the optical element of Nisper et al. be a convex surface, as taught by Ueda et al., for the purpose of providing additional refractive (i.e. focusing or defocusing) power to the diffractive structure, based on the intended application of the optical element.

14. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nisper et al. in view of Ueda et al. as applied to Claim 1 above, and further in view of Maruyama.

See Section 15 in Paper No. 3, dated 3/26/03.

Conclusion

15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

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advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

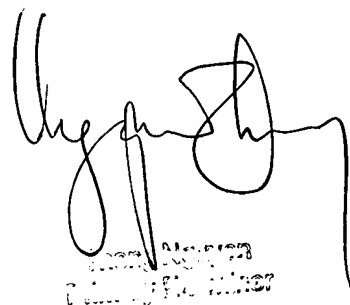
16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 703-305-4007. The examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 703-305-0024. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



Arnel C. Lavarias
August 4, 2003



Drew Dunn
Supervisor